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ARIZONA LABOR MARKET INFORMATION
NEWSLETTER

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Unemployment Rate

Seasonally Adjusted
August*

ARIZONA	6.5%
Maricopa Co.	5.0%
Pima Co.	5.1%
UNITED STATES	7.0%

Consumer Price Index

National-July
1967 - Base Year

Wage Earner/Clerical Worker -	319.1
% Chg. Yr. Ago	3.8
All Urban -	322.8
% Chg. Yr. Ago	3.6

Phoenix-2nd Qtr.
1977 - Base Year

All Urban -	190.8
% Chg. Yr. Ago	6.0

Producer Price Index

National-August*
1967 - Base Year

All Commodities	307.2
% Chg. Yr. Ago	-1.1
Finished Goods	293.5
% Chg. Yr. Ago	0.8

* Preliminary

EDUCATION & TRAINING IN ARIZONA

Nancy Augustin and JoAnn H. Wilson, editors

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THE ROLE OF EDUCATION AND TRAINING IN JOB CREATION AND ECONOMIC DEVELOPMENT

When recruiting business into a community, whether through the expansion of an already established company or the relocation of companies into new areas, questions about the education and training system always arise. In a recent survey of corporate officers responsible for relocation and expansion projects, education was the only factor cited both as a primary draw to a new location and as a major reason not to locate in a specific area. No other factor played the dual role of both a magnet and a barrier to relocation efforts.

It is generally recognized that, for economic development, companies need a trained or trainable labor force from which to draw employees. Equally important to executives, however, is the local educational system which will teach the executives' own children. A strong system which demonstrates high test scores for all levels of schooling and community interest in education are very important draws to many companies. Competent teachers and a fine educational infrastructure are critical components to any town's economic development strategy.

To be competitive, communities must therefore focus attention on the elementary and secondary schools as well as the more traditional training arena of postsecondary institutions. Nor will the importance of the basic educational system decrease in the future. Most economists and educators predict that employees in the future will demand even higher skill levels and that job opportunities increasingly will favor the well-educated. Many experts also estimate that most adults will change careers six times during their worklife. Only a solid grounding in an ever-spiraling level of "rudimentary" knowledge will guarantee the basic flexibility necessary to cope with rapid technological change.

Rapid technological change also requires flexibile retraining with public institutions meeting the needs of adults through open entry, open exit competency-based programs. There is simply no reason dislocated workers or workers requiring upgrading of skills must wait for the beginning of a new semester to initiate training. Certainly, the skill centers operated by the community colleges provide a new model for meeting the needs of adult learners.

Most states view skill training as a part of economic development, but the strategy is generally limited to sweetening relocation packages with short-term, state subsidized training, usually called quick-start training. Only recently have states like Arizona, California, Texas, and North Carolina recognized that investment in human capital through all levels of education and training from kindergarten to universities are integral components of economic development; hence the development of research parks, partner programs with industry, and the funding of basic research at the universities.

"Investing in People," to use Nobel economist Theodore Schultz's term, is the most important economic investment our state can make. And Peter Drucker claims "the basic factor in an economy's development must be the rate of 'brain formation,' the rate at which a country produces people with imagination and vision, education, theoretical, and analytic skills."

States can foster human development efforts and therefore the job creation process in the following ways:

1. Inform students of the likely outcomes of education. Arizona and Florida are the only states to require the publishing and dissemination of placement rates of vocational training programs. Clearly, the information is helpful to students choosing to invest in technical training because they can begin to weigh the outcomes against the cost. The information is also useful to institutions as an indicator of their responsiveness to new occupational fields.

2. Use job training funds to encourage individuals to start their own business--a clear way to create new jobs. More than half of all new jobs generated in the past 10 years were generated by small businesses with 20 or fewer employees. Jobs also need not be limited to highly educated, wealthy individuals. The Women's Economics Development Council (WEDCO) in St. Paul, Minnesota provides assistance to low-income women starting their own business. In its first year of operation over 1,000 women have received help and 210 new businesses started operating. Sixty-seven percent of the women receiving help from WEDCO have incomes below $10,000. Clearly, we need to explore the use of JTPA funds and other training sources to provide technical assistance in starting small businesses or to allow individuals to be trained in entrepreneurship.

3. Encourage innovative use of Job Service information and Job Service resources. Arizona has begun to implement innovative programs through T.V. programming and community outreach, but more can be done.

4. Recognize the barriers to entry into jobs created through licensing rules. While requiring certain skills or competencies for specific occupations may be reasonable, many rules are structured to screen out people by requiring educational credentials such as degrees rather than competencies. The use of associate-teachers' certification to allow math and science teachers into schools is a good example of reviewing credentials rather than competencies.

5. Review state policies which create disincentives to establishing new businesses because of high taxes, insurance requirements, or other rules. Again, many of these rules may be necessary, but we should review all policies with the recognition that some policies are counter-productive to job creation and economic development.

6. Finally, the state must provide financial assistance to low-income individuals to enable them to invest in their own development. Subsidized loans will provide access to education and training programs at upper levels of education and ensure broad-based economic development. But some 500,000 adults in this state are 16 or older and neither have a high school diploma nor are enrolled in school. For many, basic skills and literacy training are necessary and should be available free or at very low cost. For others, refresher courses and encouragements to the GED exam may be all that are necessary to help them on their way to full, productive employment and the flexibility which will be needed into the next century.

Kathryn Hyer
Department of Commerce

UNIVERSITY OF ARIZONA OFFERS CAREER DEVELOPMENT INSTRUCTION TO PRECOLLEGE PROGRAM STUDENTS

The University of Arizona has, for the past five years, been conducting a summer precollege program for gifted and talented high school students who have completed their junior year of high school. These students may receive up to six college credits, which are applicable upon their later enrollment at the college of their choice. Approximately 100 students have participated in each of the 10 sessions held since the program's inception.

Eligibility for the program requires that students have a high school grade point average of at least 3.25 on a 4 point scale, and be recommended by their school principal and a teacher or counselor. Minority students are encouraged to apply, and some scholarship money is available to Arizona residents.

Students pay $51.00 per credit hour, plus $60.00 in program and campus fees. Uni-

versity dormitory fees are approximately $150.00. Dorm residence is available and encouraged for all students. Undergraduate counselors are housed with them, and there are many social events provided for the students. The social interaction is considered an important part of the program experience.

The program, under the direction of Dr. Peggy Douglas of the College of Education, is designed to introduce the students to the college experience, expose them to the resources of the University of Arizona, and provide them with a valuable educational opportunity.

Students are offered choices from more than 50 university courses, including lab sciences, mathematics, engineering, computer study, business and public administration, humanities, social sciences, languages, philosophy, political science, psychology, art, dance, drama, music, and speech. They attend these classes along with regular university students. They are also invited to attend various cultural activities and are offered many extracurricular educational opportunities, including seminars about time management, study skills, library skills, and career development.

Career development seminars are available through the Department of Counseling and Guidance. Talented and gifted students may experience special difficulties in career planning. They are confronted with a wide array of career opportunities, and may be overwhelmed by the numerous career paths open to them and the pressures to decide.

The theme of this year's career seminars was "Career Development: Have It Your Way." The seminars stressed the concept of career development as a major life task that can allow a person to express his or her unique individuality in a positive, constructive, growth-enhancing way. It was also stressed that a career-development path which expresses each person's unique combination of values, interests, and aptitudes is a primary means of achieving satisfaction with life--affecting family, social life, health, psychological growth, and retirement. Also emphasized was the idea that career development is a continuous, lifelong process, ideally based on a continuing awareness of self and the world of work.

The students completed a values questionnaire, which enabled them to personally consider and list the relative importance of each of 50 career-related values.

Aptitudes were discussed in terms of school grades, aptitude test batteries, and college entrance examinations as providers of useful information concerning unique patterns of strengths and weaknesses.

The Strong-Campbell Interest Inventory was explained and administered to the students, and they were shown how to compare their interests to those of satisfied workers in the various occupations listed by the inventory. Exploration of occupations and career fields whose workers show interests similar to the students was presented as a means of narrowing the scope of the world of work in order to better identify those areas most congruent with each student's current interests.

The students were instructed concerning sources of information about the world of work, including training and educational requirements of various occupations, and how this information can be usefully combined with knowledge of self to determine the most likely paths to career satisfaction.

The use of training and educational institution catalogues was discussed, stressing the need to relate values, aptitudes, interests, goals, and financial postion to the requirements, costs, and services of an institution.

Values, interests, and even aptitudes change with maturation and experience. This was a surprising idea for many of the students. But they learned that, although each career-related educational and vocational decision should be seriously considered, and based on the most complete knowledge of self and the world of work available at the time, no decision need be considered irrevocable.

Bruce G. Karam
University of Arizona

THE BUSINESS AND EDUCATION PARTNERSHIP . . . KEEPING PACE WITH CHANGE

The 20th century has brought powerful new tools and an abundance of scientific and analytical information that will either enhance our progress or our insanity. As we prepare the next generation to become productive citizens to lead this nation, it is important that we build new alliances to improve the transition from school to work, to provide effective retraining as new jobs are created, and to satisfy a human need for growth. The current wave of interest in the business and education partnership is one form of that needed networking.

The working relationship between people who work in business and those who work in education is not new, but it is definitely changing to keep pace with current demands and shortcomings. The "silent," "limited" partnerships of the '50s, '60s, and '70s have been enhanced to allow for more "active" teamwork in the '80s. The advisory councils found at schools today are offering more than advice. They are taking a critical look at the curriculum to determine if students are being prepared for a changing job market. The talents of educators are being utilized to upgrade training in business and industry. The process, simply put, is resource sharing.

Arizona has been recognized frequently as leading the nation in collaborative efforts. It had strong support for student vocational training and placement in the '60s and was the first state to actively plan and finance career education from kindergarten through adult learners in the '70s. Today, scores of new, collaborative programs are being credited for the new wave of educational enrichment in both business and education.

Arizona can also claim the longest running partnership development organization in the United States. The Arizona Business-Industry-Education Council (ABIEC) was created in 1960, under the leadership of former Governor and U.S. Senator Paul Fannin. For 25 years, this membership-supported organization has brought people and ideas together to form lasting relationships and programs among hundreds of Arizona firms and elementary, secondary, and post-secondary schools.

It is important to note that the process of collaboration is generally more important than the project. The strong, impatient personalities that bring an idea to the round table are the same personalities that operate a fragile relationship. According to the President's Task Force on Private Sector Initiatives, more than half of the nation's partnerships are discontinued within the first year. The essential ingredients for success must include good listening skills; clear understanding of needs and expectations; and a compromising, patient, but positive outlook. This is a business of people; if the partnerships are to withstand the tests of time and high expectations, the leadership must be carefully selected for the purpose of facilitation.

There are some recognizable benefits to the current wave of public school and private interactions. One that is not frequently touted, but is of the utmost importance, is the possibility that mutual understanding may create political allies for greater long-range gain. The power of a superintendent is magnified when supported by a chamber of commerce president and a bank executive. Additionally, the business argument for downtown development is enhanced with support of the superintendent on the value of a good education image for business recruitment. One cannot support the other, however, until a commitment is made to take the time to listen and get involved in the problem-solving process.

A second benefit is more direct but less significant. Few superintendents are willing to even guess at the financial gain offered by corporations. The total estimate for all corporate giving to all public schools nationally is between $30 and $50 million, according to Michael Timpane, Columbia University. Any number within this range is still less than half of 1 percent of total expenditures for elementary and secondary education. Charitable giving from all businesses is less than 3 percent of total contributions and corporate taxes ac-

count for about 5 percent of federal expenditures. It would appear that corporate giving has room to grow and all giving requires careful management to have a lasting effect. Educational foundations are becoming a popular method to help recruit and manage corporate donations and in-kind services. The effectiveness of these foundations is a matter of controversial interest.

A third return to the partnership is increased morale. This intangible reward is difficult to measure, but one that can be more valuable than hard cash. In times of changing values, questionable self-worth, and critical reports on both education and business, morale may be the single element to bring positive results. Most workers, whether they be in business or education, cling to the slightest bit of praise or positive recognition. Take the example of the assembly-line worker who was ready to leave his repetitious "drudgery" until a bright-eyed child thought the employee's work to be "fascinating." Or the teacher, who after spending eight weeks in a summer business position, decided that her teaching profession was far more rewarding, even considering the one-third less pay. Teacher and business professionals are no different when it comes to job satisfaction--they both want respect, some degree of control, and freedom to explore, to create, and to grow.

Of course, the ultimate benefit is that students--of all ages--get a head start on life after school when they have been trained with "specialists" from both sides of the community. This is the only surefire method to improve our businesses, increase productivity, and prepare our country for worldwide competition and security. Is it worth the effort? You bet it is.

Unlike most school-involved programs, the partnership has met with national support and interest rather than government funding. President Reagan, recognizing the growing importance of private sector involvement in education, proclaimed the school year 1983-84 as a "National Year of Partnerships in Education" to acknowledge efforts and encourage new support. As a follow-up, the U.S. Department of Education conducted a national survey to determine the number and types of programs. Of those responding, 22 percent reported one or more partnerships in their districts and 25 percent indicated interest in starting programs. Over two-thirds of the districts with partnership programs indicated their efforts had increased over the last three years. Beth Packard, Arizona Center for Vocational Education, discovered similar results in a recent study of partnership programs in Arizona vocational programs. A recent survey conducted by the Phoenix Chamber of Commerce indicates that approximately 25 percent of its business members and 50 percent of school officials are involved in the partnership process and an equal number would like extended involvement.

There is a new ray of cooperative need appearing on the horizon. As predicted by David Snyder and Gregg Edwards in Future Forces, education will be America's largest industry by 1990. They base their prediction on four factors: 1) the baby-boom echo, with rising birth rates in the late '70s, is increasing elementary school enrollments; 2) workplace technology will require a minimum of 20 million employees to undergo formal training; 3) between 15 and 20 million displaced workers will require retraining; and 4) between five and 10 million more baby-boomers will also return to school to gain skills that will enhance their chances for promotions or career shifts.

The National Science Foundation has determined that for every dollar spent on automation, a dollar is spent on training. The American Society for Training and Development estimates that more than $40 billion is spent yearly in training programs, with approximately 15 cents budgeted for every dollar spent in automation. If Snyder and Edwards' predictions are correct (and they do not even mention expenditures for remedial training), adult vocational training and human resource development could grow into the largest element of the nation's education budget. This dramatic increase in the the demand for training programs, personnel, and cost-effective

methods will have a direct impact on public and private schools. The requirements for worker retraining and adult education could be more costly than the national expenditures for automation. The high cost and the shortage of teachers will shift electronic teaching aids to education. National policies will be developed and education will once again be a major topic for political debate.

Friendships create partnerships and vice versa. As Paul Briggs, visiting professor at Arizona State University, once said, "We are all in the same boat, so we might as well row together." For those of you who are venturing into a partnership, carry a well-planned map and enjoy the trip! If we do it right, there is smooth and productive sailing ahead.

Janet Beauchamp
Arizona Business-Industry-Education Council, Inc.

PARTNERSHIPS WITH BUSINESS: BOON TO COLLEGES--OR THREAT?

That higher education should serve the needs of society has never been debated. Our earliest institutions, including Harvard University and the College of William and Mary, were established to provide for the education of the clerical and lay leaders of their respective colonies. Since that time, higher education has come to serve the needs of society more broadly--educating, among many others, teachers, lawyers, doctors, artists, and businessmen; conducting pure and applied research; and providing public service to the community, state, and nation. For quite some time, colleges and universities were allowed to interpret and address societal needs with a minimum of coordination and little interference from external agencies and organizations. The fact that that has all changed has been the subject of much debate.

For the past 20 years, we in higher education have lamented the intrusion of the legislature, the state higher-education board, the accrediting association, and the federal government into our operations. We have lamented the demographic changes that eclipsed our brief "golden age." What we have not lamented--and I propose that we do so--is our increasingly singular attention to the business community.

In response to supervision by federal and state agencies, we have fought for our autonomy; arguing, perhaps persuasively, that we need to maintain internal control over our academic programs and the flexibility to meet changing conditions. We have not taken it lying down. We have perhaps been more successful in responding to the reality of a decreasing college-age population by inviting (probably to the enhancement of the institution) new participants and then creating new programs and services to meet their needs. However, we have not questioned or resisted increasing attention to the needs of business and industry.

Thorstein Veblen complained almost 100 years ago that higher education was a handmaiden to the capitalist system and served largely as a manpower-selection device. Colleges and universities have always educated men and women for their roles (including occupational) in society. But the institutions have had--and continue to have--other goals, as well.

They have sought to teach students to react and think critically; to understand themselves and their relation to society; to understand history, science and the cultures of other peoples; to communicate effectively; and to be good citizens. They have also sought to challenge the values of students and society--sometimes to change, but always to promote social- and self-awareness. Put simply, in addition to career education, colleges and universities have sought to extend the frontiers of

knowledge for its own sake, to generally and liberally educate their students, and to serve society.

Those goals are still sought, but increasingly each of them is being defined in terms of business and industry, often as a result of demographic and financial pressures and demands for "accountability." In our attempts to demonstrate our accountability to state agencies, to market our programs to potential students, and to garner the corporate contributions that we feel will help us maintain our flexibility and integrity, we may have escaped one master only to run to another. Directly and indirectly we have always served the business community, and I am not suggesting we should cease doing so. However, increased direct service to, and reliance on, business could erode our autonomy.

To what extent we in higher education can provide the personnel, research, and services desired by business is a popular topic today. It is hard to read the newsletter or journal of a higher-education association, attend a conference, scan an admissions brochure or fund-raising letter without reading about "linkages" with business and industry, placement in corporate jobs, or the importance of direct and indirect (matching) contributions to higher education. New academic programs are approved and existing ones reviewed in relation to the marketability of graduates and the need for a given program in the business community. At conferences, presentations are made by institutions that have forged agreements and contracts with business and industry and are poised to respond with alacrity to changing market conditions; corporate fund raisers are in demand; even undergraduates rate themselves according to starting salaries in their chosen careers. Corporate management practices, once eschewed on campuses as inappropriate to a collegial environment, are embraced ever more quickly. (A word to readers who would buy next year's equivalent of In Search of Excellence or The One-Minute Manager: Beware trampling by zealous college administrators!)

The reasons for this embrace of business and industry and of corporate practices by administrators, faculty members, and students alike are understandable. First, colleges and universities have for some time been facing pressure from governors, legislators, and state agencies to justify their academic programs and service offerings. Institutions are accountable to state agencies in particular and to the public in general. Programs in which the number of interested students has decreased or job opportunities are scarce don't fare well in program reviews. If institutions can claim that there is a market for their finished products (graduates) they are allowed to continue to produce such a product line. Put in non-business terminology, jobs justify programs and simplify the accountability issue.

Second, the economy is changing. According to John Naisbitt's Megatrends, we are in the process of evolving into an information-based society, shedding our industrial skins. It is a time of change, and each of our institutions will change to some degree in response. With a change in our economic base, concern for careers and employment is heightened. There is an immediate need to train the "high tech" technician, and there are few states and institutions that are not jumping on the bandwagon--creating their own high-tech centers or following the example of North Carolina in placing their educational systems at the service of corporations and the economic development of business and industry. Industries are turning to faculty members for the development of new processes, software, and inventions, and many faculty members are, in turn, incorporating to protect the results of their research.

Third, students today are different from students 20 years ago. Gone, to a large extent (according to the results of Alexander Astin's annual research), is student interest in developing personal philosophies, in altruism, in the helping professions; instead, we have students with an almost unbridled interest in money, power, and material possessions. The "we" generation was succeeded by the "me" generation and then by the "gimme" generation. Societal change was the hallmark of the first, self-development was the hallmark of the second, and economic development is the hallmark of

the latest. College students know what they are coming to college for--most often a job after graduation--and want to be certain to be able to get it; they have been known to sue if they don't. Some institutions have begun guaranteeing jobs, and if that doesn't put them in a direct service relationship with business and industry, I'm not certain what would.

Fourth, faculties have changed. They are less "families of scholars" and more collections of independent professionals who must conduct research and publish so as not to "perish." In order to finance that research, grants from business and industry--or their foundations--must be courted. It would be rash to say that faculty members are researching only what their corporate sponsors want, but much of what they are doing is defined in terms of the sponsors' needs. The current professorial generation, removed from struggles for academic freedom, forget that the battle for it was waged so that faculty members might teach and pursue research in any area that expanded knowledge--of their disciplines in particular and of mankind in general. Celebrated academic-freedom cases at the turn of the century involved faculty members who embarrassed or insulted corporate sponsors of institutions. Have we forgotten so soon?

Possible results of this trend toward embracing corporations and their practices are varied and unsettling. General and liberal education may give way to narrow occupational training; teaching general skills for living may be replaced by teaching marketable entry-level skills. Decisions on academic programs may be made because of what "sells" to state legislators, students, and employers rather than what individuals and society need. Faculty members may become the indirect employees of corporations, dividing their loyalty between academe and the business world. And students, as consumers, may indirectly gain more control over their curriculum than professional educators have.

Despite such possibilities, we court the corporate sponsor who will employ our graduates (so we can justify programs), finance the research of our faculty members (so that they can jump the tenure hurdles), fill the coffers of our development offices (so that we have the funds to hire more business and engineering faculty members, among others). To many of us, the business and college partnerships of today are marriages made in heaven. After all, they offer quite some dowries. But in making those alliances, we risk becoming solely a mechanism for developing manpower for business and industry instead of a means for educating students so that they are prepared to exercise good judgment and are fit to lead our nation.

We as institutions also risk losing our role as critics of society as we become so entwined in the corporate complex. In our effort to justify programs and keep the state program-review officers off our backs, we risk losing sight of our responsibility to challenge the notions and values of our students and educate them broadly rather than simply train them for their first job.

As we turn to business and industry as our financial saviors, and as more and more of us become contract researchers and corporate training specialists, we should pause to ask: To what end will such devotion take us?

Peter Garland
Pennsylvania Department of Education

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THE CENTER FOR EXCELLENCE IN EDUCATION: NAU PUTS ARIZONA ON THE CUTTING EDGE OF A NATIONAL REFORM MOVEMENT

With the 1983 publication of A Nation at Risk: The Imperative for Educational Reform by the National Commission on Excellence, a tidal wave of criticism washed over America's schools. The country was stunned at the apparent infirmity of a system that had

long been held as the world's standard of achievement in public education.

Other national studies and dozens of state reports soon confirmed what many teachers and school administrators had known for years; that sweeping changes were needed if the schools were to meet the ever-accelerating demands of preparing young people for life in the 21st century.

Teacher-preparation programs were cited by nearly all the studies as a weak link in the educational chain. Lack of rigor in both content and methodology courses, inadequate practice in the classroom, and a general failure of colleges of education to attract the best and the brightest to the profession were just a few of the problems pointed out by those who scrutinized the role of higher education in the overall erosion of quality in U.S. schools.

One concerned educator who carefully studied the reports was Eugene M. Hughes, president of Northern Arizona University (NAU). Because NAU's reputation rested largely upon the high quality of its College of Education, Hughes was quick to see a challenge in the criticism being leveled at the institutions preparing school personnel.

Hughes had been working with Arizona Superintendent of Public Instruction Carolyn Warner since 1979 to develop strategies for change. Both believed that an integrated, dynamic coalition of universities and colleges, the public schools, all levels of government, business and industry, teachers, parents, and students would be needed to solve the incredibly complex problem of redesigning the public education system.

The public outcry for reform that the flurry of studies had raised was unlikely to sustain itself indefinitely, so Hughes knew he must act quickly to translate his vision into action. In February 1984 he presented a proposal to the Arizona Board of Regents to replace the NAU College of Education with a Center for Excellence in Education.

The center would maintain the functions of the College of Education, but it would also be involved in a broad range of other educational activities with the public schools and communities throughout the state. It would form the nucleus of the dynamic, integrated system Hughes envisioned.

With the state legislature's allocation of $1 million to launch the project (in addition to the College of Education's normal budget), the nation's first Center for Excellence in Education became a reality on July 1, 1984.

The Center for Excellence was designed to address the criticism of teacher preparation programs by providing academic rigor equal to any other discipline, by eliminating redundancies in methods courses, by offering high-quality practical classroom experience for pre-service teachers, and by involving the entire university in teacher preparation.

To ensure that the center would maintain maximum flexibility and responsiveness to changes in the mercurial educational environment, a management structure was devised that eradicated the traditional college heirarchy within the center. Instead of having a department head for each subject taught, the center has five divisions under the direction of a university vice president and an executive director. Faculty are assigned to a division according to specific tasks performed at a particular time.

Called a "team/leadership matrix," the system has been used to assemble teams of specialists for the U.S. space program and is used extensively in the computer and electronics industries. To grasp how it functions in an academic setting, however, it is necessary to first understand the functions of the center's divisions.

The Division of Professional Programs is responsible for the on-campus academic programs that were the primary function of the old College of Education. In addition to continuing instruction, this division also is revising all its courses in terms of competencies, or specific skills to be mastered. This revision will identify skills common to all teaching situations and thereby eliminate many redundancies in methods courses.

The Division of Field-Based Programs extends the range of the center's influence by offering advanced degree programs in communities throughout the state where teachers would otherwise have no access to a university. The division offers coursework in 22 locations and has seven regional centers to coordinate its programs.

To ensure that the standards of excellence set at the main campus are maintained in the field, many courses are taught by NAU professors who fly to the sites. In addition, the university has invested in resource materials for libraries near each site and has helped develop computer systems to enable students to access virtually all the resources of the NAU library.

The center's third section, the Division of Educational Services, was created to enable the center to help improve public school instruction now, rather than waiting years for the impact of better-prepared teachers. It offers assistance to schools ranging from in-service programs on assertive discipline to complete revision of curriculum. The division responds to direct requests from local administrators. It has provided services to more than 100 schools in its first year of operation and has some 40 projects in progress.

The fourth part of the center is the Division of Research. This division conducts research about Arizona schools to provide direction to the other divisions. It also is responsible for faculty-development programs and has brought many of the nation's top educators to NAU, including former Education Secretary Terrel Bell.

Though it functions independently of the other four, the Arizona Center for Vocational Education is the center's fifth division. It operates under a close working relationship with the Arizona Department of Education to conduct research, develop curricula, and provide career development opportunities for vocational educators throughout the state. One of its many accomplishments has been the creation of a mobile computer facility that can be taken to any school to familiarize faculty with the latest in electronic instructional aids.

After only a year in existence, the influence of the Center for Excellence is being felt throughout Arizona and across the nation. Colleges of education are inquiring about its programs in increasing numbers, and at least three similar centers are being planned in other states.

A major study of higher education recently completed at George Mason University concluded that the need for substantial change in the preparation of teachers generally has been the subject of a great deal of discussion around the country, though little action has been seen.

"We have seen some tinkering with course requirements and evaluation procedures," the study said, "but nowhere else have we seen such sweeping comprehensive change in a teacher-preparation program as at NAU. The Center for Excellence has established a grand precedent for American higher education." The study went on to name NAU as one of the 20 most progressive universities in the nation.

Dr. George N. Smith is NAU vice president and executive director of the center. He resigned the superintendency of the award-winning Mesa School District to come to NAU to pursue what he has called a "once in a lifetime opportunity to have a impact on education in the entire country" through the Center for Excellence.

In the past year Smith has criss-crossed the country to make more than 80 presentations on behalf of the center. "It is certainly gratifying to have our efforts recognized," he said, "but we must not rest on our laurels. The progress we have made toward the achievement of excellence in education for the youth of Arizona has placed us at the forefront of America's education reform movement. We must now pledge ourselves to staying there."

Gary Leatherman
Northern Arizona University

BILINGUAL EDUCATION AT NAVAJO COMMUNITY COLLEGE

Next to government workers, the field of education represents the second largest job cluster on Indian reservations. The evolution of a rural, isolated service group under government auspices to the present highly professional and specialized occupational field has occurred within a span of less than 35 years. During this period, educational institutions have multiplied rapidly in an effort to meet the growing needs of the Navajo Nation. Today, Navajo students attend schools that are maintained by the state of Arizona, the Bureau of Indian Affairs, religious denominations, and local schools. At least two-thirds of the estimated 75,000 Navajo pupils attending are limited-English speaking with their home language being the Dineh (Navajo) language.

In November 1984, the tribal council of the Navajo Nation made a commitment to upgrade the educational standards in all schools through the passage of its Educational Policies. In these policies, there is specific provision for the inclusion of the Dineh language and culture into the curriculum of all schools within the Navajo Nation. Four months earlier, the Arizona State Legislature passed Senate Bill 1160 to provide bilingual instruction in public schools for limited-English proficient students. Both of these legislative acts have given impetus to the training of educational personnel at higher education institutions.

Navajo Community College was chartered by the Navajo Tribal Council and is in its 16th year of operation. It is accredited by the North Central Association of Colleges and Secondary Schools and offers both certificate and academic programs at the two-year level in approximately 41 different fields of study. In 1983, 153 of the 217 Navajo graduates of Northern Arizona University and University of Arizona had previously attended Navajo Community College.

In response to this recent legislation, Navajo Community College hosted a Navajo Bilingual Education Institute at its Tsaile campus from June 10 through August 1, 1985. Approximately 300 students enrolled in 28 courses covering bilingual curriculum development and methods of teaching Navajo language, history, and culture; and specific content classes as Navajo linguistics, Navajo language, history, and culture. One-third of the student body consisted of graduate students earning credits from Arizona and New Mexico institutions of higher education. For many of these participants, their coursework assisted them to meet state requirements for a Bilingual Teacher Certificate.

Evaluative reports on the summer institute were highly positive as participants were challenged to learn the structure of the Navajo language and to probe their ancestral philosophy in the study of Navajo culture. As educators and future teachers, participants studied techniques of improving instruction for Navajo children in developing curriculum and in teaching pupils about the Navajo language, history, and culture.

In light of the recent summer activities, Navajo Community College is continuing to build its teacher/teacher-aide training program in coordination with Northern Arizona University and the University of New Mexico. In such a "two plus two" approach, the Navajo Nation will benefit from quality educators whose program of study reflects a commitment of service to the Navajo pupil.

Vivian Arviso
Navajo Community College

ARIZONA SECONDARY VOCATIONAL EDUCATION IS ON THE MOVE!

Few years have seen the changes in vocational education that Arizona has seen during this past 12 months.

First, the Carl D. Perkins Vocational Education Act was passed as a new, major piece of federal legislation. Emphasis is on improving programs and increased services to targeted populations.

Meanwhile, in Arizona, "The State Vocational Education Funding Model" was being created. This would revolutionize not only the funding structure, but also the quality of programs. It would even determine what vocational courses offered in high schools would have a priority as well as support the further development of curriculum for vocational skills, related basic skills, and responsibility skills.

As a result of this new funding model, legislation was passed this spring (S.B. 2205) to include $3,000,000 in additional support to secondary vocational education programs.

Change is clearly in store for Arizona vocational education. The outcomes will be programs which are:

- skill-based with clear expectations and based on quality standards;
- integrated with basic academic and work ethic skills;
- organized upon an industry-current, sequential curriculum between secondary and postsecondary;
- validated by the private sector;
- based on a comprehensive career counseling plan for students.

The state funding plan includes several components which will lead to the above outcomes. These components are: the funding base, program standards, and new expenditure guidelines.

FUNDING BASE

Cost Factors were developed through a study of the existing programs in secondary vocational 11th and 12th grade preparation programs. These were compared with those from other states. A final factor for each viable secondary vocational education program was structured.

These are now the basis for determining the amount of money a vocational education program requires.

Labor Market Priorities were utilized to determine what occupations will have the most opportunities for students to find employment. These are then rank-ordered each year and the list becomes the order in which programs are funded.

This will encourage local education agencies to provide occupational training for the jobs most available, thus providing the prospective employer with a greater labor pool and the student with greater opportunities for employment.

Small School Incentives were established to offset the higher cost of offering programs for a small number of students.

Encouragement is provided for schools to also organize consortiums, articulate with community colleges in the area, and deliver programs via telecommunications or mobile labs.

By this means, individuals in a rural area may have a greater opportunity for occupational training than heretofore possible.

PROGRAM STANDARDS

Program standards were designed to ensure that the secondary vocational education student receives:

- instruction which is industry current;
- curriculum which is skill-based and directly related to the jobs in Arizona;

- instruction which has performance measures against which the student may judge the level of competencies required;
- an instructional setting with equipment which is industry current;
- activities which will involve working in the community and actual on-the-job experiences; and,
- other assistance and support for special needs.

Vocational education will take an in-depth look at its programs in the next two years. It will examine how closely it comes to these standards and what still needs to be accomplished.

The Arizona Department of Education has established a number of activities to enhance the quality of vocational programs. These include:

- An inservice program called "RAVE" to update teachers in the latest industry methods and equipment.
- Development of the Arizona Employability Skills Lists including job skills, related basic skills, and responsibility skills. These are validated by workers from across Arizona.
- Development of instructional materials with the Arizona Center for Vocational Education to provide these skills to students.
- A total facility and equipment inventory for Arizona with a recommended list of equipment established for each vocational program.

NEW EXPENDITURE GUIDELINES

The guidelines for expenditures emphasize the need for equipment, supplies, and repair. These needs are identified by local adminstrators and school board members as critical.

This emphasis also places a high standard on accountability, directing the monies to high priority occupational programs. The result should be an increased ability to deliver high quality vocational education programs.

Supplemental funding programs are also available through federal funds for support programs for special populations, adult, and postsecondary programs.

CONCLUSION

Secondary vocational education in Arizona is moving in a new direction toward high quality programs geared to industry needs.

This will provide a structure to build upon which will enhance not only the individual opportunity for entry-level technical jobs but also encourage industry and business to locate and expand in Arizona because of the well-qualified labor pool.

This effort has involved over 300 business people and 200 educators this past year. Our future in Arizona will be forged by these continued linkages between education and the business community striving for a quality product--THE ARIZONA WORKER.

VOCATIONAL EDUCATION IN ARIZONA IS ON THE MOVE! Won't you join us in this move to a greater Arizona future?

Barbara Border
Arizona Department of Education

TEACHER COMPENSATION

The spirit of reform recognizes the importance of teachers. Current reform efforts are acknowledging this importance by suggesting that the key to improving education lies in changing the way teachers are paid. In this sense, teacher compensation is seen as the new management tool in education.

There are five basic approaches to teacher compensation:

- Merit pay--systems which base all or part of teachers' salaries on periodic assessments of their performance.
- Market sensitive pay--systems which tie teachers' pay to the external labor market.
- Job ladders--systems which have salaries on specific sets of duties.
- Unified salary schedule--systems which tie teachers' pay to levels of education and experience.
- Career development plans--systems which base salaries on factors that demonstrate skill development.

In recent years, it appears that teacher expectations about levels of pay have indeed been violated. There is ample evidence that the salary levels in teaching are lower than those available in occupations requiring comparable levels of education and training. In fact, this holds true for both entry salaries and career earnings. It is not surprising that people who consider teaching, but choose other occupations, cite low salary as a major reason for seeking alternatives. Thus, to the degree that teachers' levels of pay are not keeping up with those of other professions, we need to focus on improved salaries in attracting prospective teachers to the profession.

The research findings on retaining teachers in the profession naturally extend from the findings on attracting teachers. The degree to which teachers feel successful with students is of primary importance in teacher retention. Teachers who leave education say they felt blocked in their attempts to reach students and help them learn.

Although teachers work to meet economic needs, what motivated them most to improve their teaching skills is the prospect of helping students learn. Research suggests that teachers readily seek out growth and development opportunities when they feel that the opportunities would facilitate their success with students. Thus, development opportunities must appeal to teachers' sense as professionals, as persons who apply their knowledge and skills to treat and manage conditions that promote student learning.

Career development approaches to compensation should be differentiated from job ladders and merit pay. Career development plans are designated to facilitate the continuous skill development and professional growth of teachers. While job ladders focus on differentiating jobs and often on moving teachers into jobs with hierarchical functions or quasi-administrative functions, career development plans focus on enhancing the development of teachers within the function of classroom teaching. Approaches to career development spur the career growth of teachers in the classroom by increasing the opportunities that they need to further develop their skills.

Successful school district implementation of career development plans requires participation by teachers in all stages of the plan's development. It also requires significant time commitments from teachers, school administrators, and district administrators for program planning. During the trial period and beyond, there must be a long-term commitment to funding by district administrators.

Finally, career development plans require difficult decisions concerning the specific sets of skills required for career-level advancement. In a career-development plan, promotion from one career level to another and corresponding salary increases are in recognition of an individual teacher's readiness to advance, having demonstrated the specific sets of skills that are necessary to qualify for the next level. It is important to recognize that in career-development approaches, the school system has a responsibility to help the teacher prepare for promotion by providing the necessary resource support and development opportunities.

The formative evaluation system of a school is critical in helping teachers demonstrate the competencies expected by the system at the next higher level. Unlike summative evaluation, which focuses on judging teacher performance, formative evaluation focuses specifically on helping teachers enhance their skills. Formative evaluation systems do this by continually monitoring teachers performance, providing feedback to teachers, and specifying recommendations

for improving skills. In formative evaluations, teachers may capitalize on their already existing strengths, as well as develop further sets of skills that will build on and enhance the competencies expected for promotion. Thus, judgments about whether or not individual teachers are ready for promotion, while bound to be somewhat subjective, are facilitated by strong formative evaluation systems and a strong commitment by the school system to providing teachers with the resources they need to demonstrate skills.

Cheryl Anderson
Arizona Education Association

EXCELLENCE IN EDUCATION THROUGH EXCELLENCE IN MANAGEMENT

During the summer of 1984, IBM's Corporate Management Development group offered a special five-day program for school executives and administrators throughout the United States. The program included many management topics that are taught to IBM managers worldwide.

More than 20 Arizona officials attended the sessions in Southbury, Connecticut, including Merrill A. Grant, the former superintendent of Tucson Unified School District (TUSD). While in Connecticut, Grant wrote to the IBM chairman of the board, John R. Opel, and asked if IBM could loan one of the Southbury staff to help Grant set up the program for TUSD's 120-plus administrators.

The request was forwarded to the IBM Tucson plant and the management development staff. Dr. Mary Burke, a management development senior education specialist, took on the added responsibility of taking the corporate program, the Tucson management development programs, and TUSD's thoughts on what they needed--turning these elements into a tailored program that contained proven management techniques. Dr. Burke, a former teacher, was able to filter through the apparent differences in school management and business management and put a program together that concentrated on the similarities.

The Tucson program which adopted the slogan "Excellence in Education through Excellence in Management," has been offered six times during 1985. One hundred twenty TUSD principals and assistants, 20 Sunnyside Unified administrators, and 29 administrators from eight other Pima County districts have attended the program.

The topics, taught mostly by IBM managers and education specialists, concentrated on "people management" subjects such as: situational leadership, communications, performance management, and managing for agreement. Business planning, business and education trends, and using the PC as a management tool were also covered. IBM senior managers provided the classes with perspectives on the IBM culture--the basic beliefs and principles that guide the IBM management team.

The feedback from the programs has been very positive. Many of the principals have said that all of their formal training has been in education and education administration. Most said they never had formal training in management techniques and some said they never thought of themselves as managers. The IBM team intentionally never tried to convince the principals that they were managers. They didn't have to, because the principals participated so well in each module that they convinced each other that the various techniques were applicable. This also led to an unexpected benefit of the program. The participants felt that spending a week with their peers--away from the office--gave them some quality time to compare notes and just talk.

What may turn out to be the most valuable lesson for both the school officials and the IBM employees involved in the program is simply that the similarities far outnumber the differences. Many of the rules are different, the organizations are different, and the end products are different. However, good management has the same positive effect in building data processing equipment as it does in building outstanding teachers and students.

Larry J. Rauchut
IBM Tucson

ARIZONA STATE UNIVERSITY'S PROJECT INTERFACE

The options afforded disabled persons have been augmented in recent years through legislation, federal and state, aimed at improving their educational and employment opportunities. Recognizing the fact that, without employment, many disabled individuals turn to community services only to find a confusing array of service providers, differing eligibility requirements, and long waiting lists--Congress responded. In 1983, Congress amended the Education of the Handicapped Act to establish the Secondary Education and Transitional Services for Handicapped Youth Program. This act enabled the Office of Special Education and Rehabilitative Services (OSERS) to initiate grant activity which would provide assistance for projects that:

1. strengthen and coordinate education, training, and related services that assist handicapped youth in the transition to competitive or supported employment, postsecondary education, vocational training, continuing education, or adult services; and

2. stimulate the improvement and development of programs for secondary special education.

PROJECT INTERFACE

Intervention and Networking between Training and Education to Retain and Foster Advancement in Careers and Employment for handicapped postsecondary youth presently is operational at Arizona State University's Community Services Center.

The Project INTERFACE model consists of four major components to the attainment of the project purpose: identification, intervention, employment, and evaluation.

IDENTIFICATION: There are three populations of students to be identified: disabled secondary students between the ages of 18 and 22 who (1) participated in both special education and vocational education, (2) have participated in vocational education programs only, or (3) have not participated in either vocational or special education programs. Assistance in the identification process is provided by government agencies, school guidance counselors, special education personnel, vocational education personnel, disabled person advocacy groups, and the news media.

INTERVENTION: There are three subcomponents to the intervention component: intake, vocational evaluation, and employment training. The intake process involves establishing client relationships, developing and understanding each client's unique situation and needs, and conveying information about the job clearinghouse and about setting personal goals.

Vocational evaluation entails planning and coordinating evaluation, providing the client with occupational guidance counseling (both individual and group), providing work adjustment services, coordinating services, evaluating client progress, re-evaluating goals as necessary, helping the client to make occupational choices, placing the client on the job, and conducting situational assessment.

Employment training involves individual counseling, crisis intervention, job-seeking skills training, arranging ancilliary services, arranging and planning placements, generalized skill training, and writing an Individualized Transition Education Plan (ITEP).

EMPLOYMENT: The third major component is founded on two specific areas: (1) situational assessment, and (2) a methods engineering approach. Securing employment, providing individual counseling, working with the employer, following client progress, and crisis intervention are included in this step.

A primary method of ensuring the placement of individuals in competitive employment is situational assessment. Situational assessment focuses on the general work personality of the individual rather than on specific job skills. In essence, situational as-

sessment allows one to identify the specific employment strengths and weaknesses of the individual.

The methods engineering approach is used to modify jobs when necessary. According to Brolin and Webster,* job modification consists of four elements:

1. Modifying the environment: Changing the physical layout or location of the work environment and providing assistive devices to accommodate the disabled worker.

2. Modifying the process: Restructuring job procedures, which includes analyzing the work task, determining whether or not the job can accommodate a person with a disability, and redesigning the task for a disabled person in such a way that the task will be accomplished with the desired outcome.

3. Modifying the machine: Making physical changes in a machine or equipment in order to permit individuals with disabilities to accomplish the job within time and quality limits.

4. Modifying the person: Using medical or engineering technology to provide a prosthetic device that can assist in managing a work task that could not otherwise be managed.

EVALUATION: This final component involves both client and project efficacy evaluation. Client evaluation primarily involves employment and adjustment to work failure. Intervention to promote client success involves counseling and support, crisis intervention, placement evaluation, and the continuous monitoring of the client's performance.

There are three areas of project efficacy evaluation--formative, summative and development, and implementation of related research. There are three major goals relative to formative evaluation: (1) To what extent is the model demonstration program effective, (2) To what extent is the program efficient, and (3) To what extent is the program transportable?

Presently, Project INTERFACE staff are processing disabled individuals through the initial phases of their model postsecondary transition program. Twenty-five youths between the ages of 18 and 22 have been identified and are involved in the orientation, evaluation, and computer-assisted instruction phases. Additional referrals are expected as a mailing to over 400 disabled youths and parents has been made. Local public schools have been very cooperative in mailing project materials to their former students.

In addition to student identification and training, Project staff have contacted approximately 200 business and industrial groups soliciting their cooperation in providing employment opportunities for Project trainees to ensure trainee participation in that project phase.

Project INTERFACE can provide employers with:

- a pool of job-ready applicants to fill their employment needs;
- follow-up to ensure new hires make an appropriate adjustment to the work environment;
- assistance with their Affirmative Action tion Programs through recruitment and technical assistance;
- assistance with handicap awareness training; and
- assistance to obtain training and tax incentives.

Project INTERFACE staff invite interested persons or groups to visit at 200 North Curry Road, Tempe or contact the office at (602) 965-2070 for further information.

Dr. Steven D. Owen
Arizona State University

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*Brolin, J. and D. Webster, "Job Modification in Vocational Evaluation," Vocational Evaluation and Work Adjustment Bulletin, II (3), pp. 7-12.

ARIZONA UNEMPLOYMENT INSURANCE ACTIVITIES - JULY 1985

	July 1985	June 1985	July 1984	% Change From One Year Ago
Arizona Claimants Served*	31,633	31,970	28,160	+ 4.3%
Arizona Average Weeks Unemployed**	8.5	8.3	8.8	- 4.6%
Arizona Benefits Paid*	$ 9,787,353	$ 8,889,619	$ 8,659,073	- 5.9%
Arizona Trust Fund Balance	$303,731,428	$295,410,671	$222,160,497	+43.0%

*All Programs **UI only

THE ARIZONA LABOR FORCE IN JULY

After eight months of rising unemployment, Arizona's unemployment rate followed the national rate by declining to 6.5 percent. While the unemployment rate in Maricopa County was unchanged in August, Pima County and eight rural counties saw their unemployment rates fall. A combination of greater-than-seasonal hiring and a drop in the number of job seekers pushed the unemployment rate down. Although this one-month improvement is encouraging, the outlook is for higher unemployment in the months ahead.

Looking at employment changes by industry and area, August continued the pattern of the last few months. The metropolitan areas continue to have the most activity. For the second month in a row, construction employment declined as Maricopa County saw a 300 worker loss. With vacancy rates rising in both commercial and multifamily housing, it is unlikely that much additional new construction will be started in this area. But with vacancy rates in single-family housing low, the employment decline that we expect to last well into next year should not be as precipitous as in previous years.

The addition of 700 new jobs in manufacturing this month was the result of stronger-than-usual seasonal gains in food processing, apparel, and printing. Unfortunately, these seasonal gains will be lost later this year. Meanwhile, the electronics industry lost 500 jobs which just offset the increase of 500 jobs in aerospace. This is the fourth month in which electronics has lost employment, and since its peak in April, a total of 1,800 jobs have been lost.

Among the state's remaining industries, all showed stronger than usual activity. In both trade and services, the declines that were recorded were less than usual as Maricopa County and the balance of the state showed strong growth. Most of that growth can be attributed to continuing summer tourism in the northern rural counties, preseason activity in the southern rural counties, and strong population growth in Maricopa County. Of noteworthy importance is the lack of hiring which has occurred in the state's department stores over the last year. While overall job growth in the last 12 months has been good in Maricopa and Pima counties, there has been a net department store job loss. Clearly, competition among department stores is keen.

Finally, the addition of 1,000 jobs in government resulted from the addition of 2,400 jobs in schools as they began to get ready for the fall semester, and the loss of 1,400 summer jobs in various local government programs. Both events are expected seasonal activity and in September a very large jump in employment is expected as schools open for the new term.

August was another month of listless activity for Arizona's economy. Although unemployment was down, that trend is not expected to continue because future economic growth nationally is expected to be slight. While there are no obvious forces tending to push the economy into a deep recession, there is an equal lack of forces influencing a recovery. Therefore, we expect the economy to languish in an environment of seasonal employment changes and declines in manufacturing and construction.

Dan Anderson
Research Administration

Arizona Labor Force and Employment

August 1985 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Aug.* 1985	Jul. 1985	Aug. 1984	Jul. to Aug.	1984 to 1985
TOTAL CIVILIAN LABOR FORCE**	1426.0	1430.1	1406.0	-4.1	+20.0
Total Unemployment	96.5	102.3	67.2	-5.8	+29.3
Rate	6.8	7.2	4.8	---	---
Rate (Sea. Adj.)***	6.5	6.7	4.6	---	---
Total Employment	1329.5	1327.8	1338.8	+1.7	-9.3

THE ABOVE LABOR FORCE STATISTICS SHOULD

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1236.0	1237.0	1162.0	-1.0	+74.0
Manufacturing	183.4	182.7	175.1	+0.7	+8.3
Durable Goods	145.0	145.4	138.5	-0.4	+6.5
Stone, Clay and Glass	8.5	8.5	7.3	+0.0	+1.2
Primary and Fabricated Metals	16.7	17.1	17.1	-0.4	-0.4
Primary Metals	7.2	7.1	7.2	+0.1	+0.0
Fabricated Metals	9.5	10.0	9.9	-0.5	-0.4
Machinery	69.9	70.4	69.1	-0.5	+0.8
Other Durable Goods	49.9	49.4	45.0	+0.5	+4.9
Aircraft and Missiles	23.0	22.5	20.5	+0.5	+2.5
Lumber and Wood Products (Except Furniture)	7.8	7.7	7.1	+0.1	+0.7
All Other Durable Goods	19.1	19.2	17.4	-0.1	+1.7
Nondurable Goods	38.4	37.3	36.6	+1.1	+1.8
Food and Kindred Products	8.6	8.3	7.9	+0.3	+0.7
Apparel	4.9	4.5	5.0	+0.4	-0.1
Printing and Publishing	14.4	14.2	13.5	+0.2	+0.9
All Other Nondurable Goods	10.5	10.3	10.2	+0.2	+0.3
Mining and Quarrying	11.3	11.1	13.1	+0.2	-1.8
Copper Mining	8.6	8.6	10.2	+0.0	-1.6
Other Mining and Quarrying	2.7	2.5	2.9	+0.2	-0.2
Construction	109.9	110.1	98.6	-0.2	+11.3
Trans., Communications, and Public Utilities	63.3	63.3	60.8	+0.0	+2.5
Transportation	28.6	28.7	27.9	-0.1	+0.7
Communications and Public Utilities	34.7	34.6	32.9	+0.1	+1.8
Trade	298.4	299.7	282.6	-1.3	+15.8
Wholesale Trade	62.2	62.5	58.4	-0.3	+3.8
Retail Trade	236.2	237.2	224.2	-1.0	+12.0
General Merchandise and Apparel	37.7	37.7	37.6	+0.0	+0.1
Food Stores	35.8	36.3	34.1	-0.5	+1.7
Automotive and Service Stations	29.7	29.7	27.9	+0.0	+1.8
Eating and Drinking Places	83.0	83.3	77.7	-0.3	+5.3
Other Retail Trade	50.0	50.2	46.9	-0.2	+3.1
Finance, Insurance, and Real Estate	77.6	77.2	72.7	+0.4	+4.9
Services and Miscellaneous	295.1	296.8	274.8	-1.7	+20.3
Hotels and Other Lodging Places	29.7	30.1	26.9	-0.4	+2.8
Business Services	67.8	68.1	61.6	-0.3	+6.2
Health Services	71.2	71.4	68.9	-0.2	+2.3
Other Services	126.4	127.2	117.4	-0.8	+9.0
Government	197.0	196.1	184.3	+0.9	+12.7
Federal	41.2	41.3	39.9	-0.1	+1.3
State and Local	155.8	154.8	144.4	+1.0	+11.4
School	80.9	78.5	73.4	+2.4	+7.5

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE--Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

August 1985 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Aug.* 1985	Jul. 1985	Aug. 1984	Jul. to Aug.	1984 to 1985	Aug.* 1985	Jul. 1985	Aug. 1984	Jul. to Aug.	1984 to 1985
903.3	904.9	887.4	-1.6	+15.9	256.5	257.3	255.6	-0.8	+0.9
46.5	47.1	31.7	-0.6	+14.8	13.4	14.3	11.0	-0.9	+2.4
5.1	5.2	3.6	---	---	5.2	5.6	4.3	---	---
5.0	5.0	3.5	---	---	5.1	5.3	4.2	---	---
856.8	857.8	855.7	-1.0	+1.1	243.1	243.0	244.6	+0.1	-1.5

OT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

811.2	813.7	756.1	-2.5	+55.1	223.1	223.3	209.6	-0.2	+13.5
131.9	132.1	126.7	-0.2	+5.2	32.0	31.7	29.7	+0.3	+2.3
105.4	106.0	101.4	-0.6	+4.0	26.8	26.6	24.8	+0.2	+2.0
5.1	5.1	4.3	+0.0	+0.8					
11.0	11.2	10.9	-0.2	+0.1					
55.9	56.5	55.7	-0.6	+0.2					
33.4	33.2	30.5	+0.2	+2.9					
26.5	26.1	25.3	+0.4	+1.2	5.2	5.1	4.9	+0.1	+0.3
5.5	5.5	5.2	+0.0	+0.3					
3.1	2.9	3.0	+0.2	+0.1					
10.5	10.4	9.9	+0.1	+0.6					
7.4	7.3	7.2	+0.1	+0.2					
0.6	0.6	0.6	+0.0	+0.0	2.4	2.4	3.3	+0.0	-0.9
75.8	76.1	67.3	-0.3	+8.5	21.5	21.4	18.6	+0.1	+2.9
42.0	41.9	39.3	+0.1	+2.7	8.8	8.9	9.1	-0.1	-0.3
19.6	19.7	18.6	-0.1	+1.0	3.9	4.0	4.2	-0.1	-0.3
22.4	22.2	20.7	+0.2	+1.7	4.9	4.9	4.9	+0.0	+0.0
202.0	203.2	191.7	-1.2	+10.3	49.4	49.6	46.6	-0.2	+2.8
49.5	49.8	47.0	-0.3	+2.5	7.5	7.6	6.6	-0.1	+0.9
152.5	153.4	144.7	-0.9	+7.8	41.9	42.0	40.0	-0.1	+1.9
23.4	23.3	23.5	+0.1	-0.1	7.2	7.3	7.3	-0.1	-0.1
22.5	22.8	21.7	-0.3	+0.8	5.8	5.9	5.4	-0.1	+0.4
19.1	19.1	17.7	+0.0	+1.4	4.6	4.6	4.4	+0.0	+0.2
53.0	53.5	49.3	-0.5	+3.7	15.6	15.5	14.7	+0.1	+0.9
34.5	34.7	32.5	-0.2	+2.0	8.7	8.7	8.2	+0.0	+0.5
60.9	60.4	56.8	+0.5	+4.1	10.8	10.8	10.2	+0.0	+0.6
197.7	198.6	183.5	-0.9	+14.2	55.9	57.0	50.3	-1.1	+5.6
17.0	17.4	14.7	-0.4	+2.3	4.4	4.3	4.0	+0.1	+0.4
55.0	55.1	50.8	-0.1	+4.2	10.0	10.3	8.4	-0.3	+1.6
47.1	47.2	46.9	-0.1	+0.2	15.4	15.4	13.9	+0.0	+1.5
78.6	78.9	71.1	-0.3	+7.5	26.1	27.0	24.0	-0.9	+2.1
100.3	100.8	90.2	-0.5	+10.1	42.3	41.5	41.8	+0.8	+0.5

-- Prepared by Labor Market Information, Research and Analysis (CPS, 1/85)

NONMETROPOLITAN COUNTIES
LABOR FORCE AND EMPLOYMENT
August 1985

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,500	28,300	36,250	12,550	7,350	2,100	4,550
Total Unemployment	2,725	2,300	3,575	1,425	825	350	800
Rate	17.6%	8.1%	9.9%	11.4%	11.2%	16.7%	17.6%
Rate (Seas. Adj.)**. . . .	16.3%	8.1%	10.1%	11.4%	10.8%	16.8%	-INA-
Total Employment	12,775	26,000	32,675	11,125	6,525	1,750	3,750
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS							
TOTAL WAGE AND SALARY. . . .	14,850	23,100	33,725	9,875	4,525	1,800	2,450
Manufacturing.	750	2,175	2,625	1,300	150	50	75
Mining and Quarrying	25	175	50	1,625	50	650	0
Construction	1,000	1,350	1,675	425	150	100	75
Trans., Comm., & Pub. Util..	1,850	1,475	2,325	325	175	50	50
Trade.	1,425	5,025	8,025	1,925	1,325	300	850
Fin., Insur., & Real Estate.	275	625	775	225	150	25	75
Services and Miscellaneous .	4,750	3,000	8,850	1,800	800	100	675
Government	4,775	9,275	9,400	2,250	1,725	525	650

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	23,875	24,900	30,300	9,200	32,800	38,450
Total Unemployment	2,400	3,400	4,050	2,175	1,925	10,725
Rate	10.1%	13.7%	13.4%	23.6%	5.9%	27.9%
Rate (Seas. Adj.)**. . . .	10.3%	13.8%	12.6%	21.0%	6.1%	-INA-
Total Employment	21,475	21,500	26,250	7,025	30,875	27,725
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS						
TOTAL WAGE AND SALARY. . . .	17,925	18,525	24,600	7,725	20,100	22,475
Manufacturing.	2,500	1,825	3,150	975	2,400	1,575
Mining and Quarrying	300	1,100	3,600	0	600	75
Construction	1,500	950	1,075	300	1,975	1,975
Trans., Comm., & Pub. Util..	1,125	1,600	1,150	550	875	900
Trade.	5,225	3,450	4,425	2,975	5,225	6,875
Fin., Insur., & Real Estate.	875	375	675	250	800	850
Services and Miscellaneous .	3,550	5,475	2,825	1,225	4,175	4,225
Government	2,850	3,750	7,700	1,450	4,050	6,000

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

ARIZONA LABOR FORCE AND EMPLOYMENT FOR ECONOMIC ASSISTANCE PROGRAMS
August 1985

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,425,923	1,329,424	96,499	6.8%
Apache	15,490	12,766	2,724	17.6
Cochise	28,299	25,995	2,304	8.1
Coconino	36,239	36,672	3,567	9.8
Gila	12,536	11,115	1,421	11.3
Graham	7,351	6,532	819	11.1
Greenlee	2,091	1,733	358	17.1
La Paz	4,560	3,761	799	17.5
Maricopa	903,343	856,874	46,469	5.1
Mohave	23,874	21,472	2,402	10.1
Navajo	24,904	21,513	3,391	13.6
Pima	256,501	243,128	13,373	5.2
Pinal	30,298	26,255	4,043	13.3
Santa Cruz	9,189	7,019	2,170	23.6
Yavapai	32,798	30,876	1,922	5.9
Yuma	38,450	27,713	10,737	27.9

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

ESTIMATED HOURS AND EARNINGS OF PRODUCTION WORKERS IN SELECTED INDUSTRIES IN ARIZONA
August 1985

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	AUG.* 1985	JULY 1985	AUG. 1984	AUG.* 1985	JULY 1985	AUG. 1984	AUG.* 1985	JULY 1985	AUG. 1984
FOR THE STATE OF ARIZONA*									
Manufacturing	387.84	386.56	369.05	40.4	40.1	40.6	9.60	9.64	9.09
Aircraft & Missiles	INA	INA	INA	INA	INA	INA	INA	INA	INA
Food & Kindred Products	333.38	357.41	310.84	38.8	40.8	39.1	8.59	8.76	7.95
Primary Metals	492.57	484.16	467.64	39.0	38.6	39.1	12.63	12.53	11.96
Machinery	350.27	352.32	323.36	39.4	39.9	39.1	8.89	8.83	8.27
Copper Mining	559.78	572.83	548.26	41.1	41.3	39.7	13.62	13.87	13.81
Construction	437.47	397.19	421.11	37.2	34.3	35.9	11.76	11.58	11.73
Utilities	565.85	568.42	562.40	42.9	42.9	45.1	13.19	13.25	12.47
Retail Trade**	247.61	239.02	235.96	34.2	34.0	34.7	7.24	7.03	6.80
Wholesale Trade	353.98	343.17	356.24	37.3	36.9	38.1	9.49	9.30	9.35

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in coo eration with the U.S. Department of Labor,Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/84)

MARICOPA COMMUNITY COLLEGES' INFORMATION TECHNOLOGIES CONFERENCE

"Information Technologies" was the topic of a conference sponsored by the Maricopa Community Colleges at the YWCA Leadership Development Center in Phoenix on March 26, 1985. Forty representatives of business and the Maricopa Community Colleges came together for a day to learn the most current needs of business and industry for computer and computer-related knowledge and skills that need to be delivered by the community colleges.

Dr. Paul A. Elsner welcomed the participants, pointing out the commitment of the colleges to supporting computerization and computer resources in student information systems, library automation, financial systems, shared data bases, electronic mail, and improved voice and data integrated systems as well as in the curriculum of the colleges that prepares students for work in business and industry. Faculty, support staff, and administration who work daily with sophisticated systems in the information technologies are better prepared to train students for jobs in information technologies and meet the needs of industry.

Keynote speaker Barbara Stallings, of Digital Equipment Corportion, encouraged the participants to approach the dialogue with openness and willingness to look at the needs of industry and the work of the colleges in new ways.

The committee prepared the following questions that generally guided the small-group dialogue:

1. How has the advent of information technology affected your organization?

2. What directions are you anticipating in the future?

3. How has the information technology revolution affected present and future employee job-skill needs?

4. What needs do you have or anticipate for employee training?

5. What should we be teaching to provide you with capable employees?

6. How should we be offering our programs/courses to best meet your needs?

Once the conference proceedings were analyzed it became apparent that there is a new structuring of information technologies into four general areas: (1) systems management and implementation, (2) software applications and use, (3) systems and programming, and (4) technical support.

SYSTEMS MANAGEMENT AND IMPLEMENTATION

Persons employed in management positions require a broad understanding of how information systems operate. This broad base should enable a manager to participate knowledgeably in the purchase of computer equipment, systems, services, and design of procedures to increase organizational efficiency and effectiveness. Key areas of knowledge in information technologies would include: networking, data and voice communications, data bases, office automation, automated marketing, data processing, and the movement of data through an entire system.

SOFTWARE APPLICATIONS USE

This area of knowledge and skill involves the largest number of employees that interact with information systems.

People working with the application of specialized software need to understand the systems they are using. In addition, they need to know and understand general concepts of information systems, such as how networks and data bases operate and how their work relates to these systems. They could be employed in a wide variety of positions such as a secretary using a word processing system, a mid- or high-level manager communicating via electronic mail, an accountant using a financial data base, or a plant production supervisor assessing labor costs. Persons working in these modes do not need to have programming skills.

SYSTEMS AND PROGRAMMING

There will still be work for the computer programmer, but the role is changing. The emphasis for the future will be toward working more closely with system users as consulting experts to pull together the necessary computer and software resources to accomplish a computing goal. The emphasis will be on using or modifying purchased software and less on company-developed systems.

These are technical experts who help the company implement technology in the work place. They will develop into specialists in data bases or networking, for example. The people in systems and programming will need to increase interpersonal communication skills as their work takes them into closer communication ties with non-technical co-workers.

TECHNICAL SUPPORT

In this area are the people who keep the hardware operating. They require a high degree of technical skill and knowledge in increasingly complex computer and telecommunications systems. This technical area was not the major focus of this conference.

Throughout the conference there was a strong emphasis that the specialized skills and knowledge in information technologies are sorely needed and that the information technologies impact all types of careers from medicine, construction, law, manufacturing, to accounting, etc. But the computer is not too forgiving of a person who lacks proficiency in writing, spelling, math, and reading. A wrong key selected on the keyboard can make a very large discrepancy in the communicated result.

A final report with all the results will be published shortly. The colleges will meet again with the participants next spring to demonstrate the work accomplished during the year that supports the recommendations.

Bertha A. Landrum
Maricopa Community Colleges

William S. Kiernet
Rio Salado Community College

A GUARANTEE STATEMENT FOR NEW EDUCATION GRADUATES

"We stand behind our product" is a slogan usually expressed in advertisements. At Grand Canyon College, this slogan is expressed by the faculty of the Education Department. This expression denotes a vote of confidence the faculty at Grand Canyon College has in its own program and its own graduates. Accountability is an important function of the American structure and the faculty at Grand Canyon College is willing to be held accountable through the performance of its Education graduates. The public has a right to demand accountability within the classroom. In response to that demand, Grand Canyon College designed a guarantee to provide students, graduates, and patrons with assurances of program quality and effectiveness.

The leaders in the state of Arizona have long recognized that quality through acceptance of its teacher candidates in classroom practicums and student teaching experiences, in leadership roles assigned to its graduates, and Grand Canyon College's faculty participation in establishing collegiality with the personnel in the school districts in the state.

There are several unique factors that are prevalent in the teacher-education program at Grand Canyon College:

- Entry into the classroom as early as a student's sophomore year.
- A minimum of 120 practicum hours in the classroom prior to student teaching.
- Faculty who have an average of 10 years of experience in the K-12 school system.
- Adjunct faculty who hold concurrent employment in the classroom or in administrative positions.

- A 94 percent average placement rate over the past 10 years.

Grand Canyon College was the first private institution in the state to offer a guarantee to any of its teacher graduates who are experiencing difficulty in the first year of teaching. Believing in the excellence of the program, the faculty at Grand Canyon College will provide assistance and support to any graduate recommended by Grand Canyon College for teacher certification in the state of Arizona at the elementary or secondary level.

The assistance began with the December 1984 graduates. The guarantee continues throughout the graduate's first year of teaching at no expense to the school district or to the teacher graduate.

Faculty from Grand Canyon College will support the new teacher by acting as consultants in such areas as:

- curriculum planning and design;
- classroom management;
- content presentation; and,
- individualized instruction.

The need for assistance may be determined by the Grand Canyon College graduate or by the principal or by the superintendent. The Education Department of Grand Canyon College will respond to such requests by providing faculty with appropriate expertise, either from the Education Department or from the other disciplines.

For example, if the teacher graduate is having difficulty in music education classes, faculty from both the Education and Music departments would act as consultants. If the difficulty is in the preparation of lesson plans at the elementary level in teaching science, faculty from both the Elementary Education and Science departments might respond.

The method of assistance will depend upon the individual needs of the teacher graduate. These methods might include:

- on-site classroom visitations;
- telephone conferences;
- small group sessions at the district level;
- identification of resource personnel and materials; and,
- last but not least--the promise of a friendly word of encouragement and support.

Letters of this guarantee were sent to every superintendent throughout the state of Arizona. As of this date, Grand Canyon College is pleased to announce that no one has contacted the Education Department for assistance.

Other colleges throughout the nation offer similiar programs of guarantee or warranty for their graduates. These programs have been established as a response to the nationwide debate over what excellence in education is and how to prepare teachers for the classroom. The establishment of these programs has brought about positive reactions from the school districts, the patrons, and the students themselves. Sheryl New, a student majoring in Special Education at Grand Canyon College, said she expects the guarantee will give confidence to a lot of first-year teachers. "The faculty members won't just let us go and say, 'We've done our job.' I have a lot of confidence in Grand Canyon College and what it can do for me." Nelda Kent, a retired teacher from the Alhambra Elementary District in Phoenix, said the guarantee is important because "there are certain things that you find out once you begin teaching that you cannot experience while in college." Education is the mainstay of our nation. With positive responses like the Guarantee Program at Grand Canyon College, the public can expect effective, competent teachers in its classrooms.

Dr. Patty J. Horn
Grand Canyon College

CAN DO AND THE PROPRIETORY SCHOOL

CAN DO (Coalition for the Advancement of New and Developing Occupations) is a management and funding service organization linking industry and educational institutions to help meet Arizona manpower training needs. In January 1982, the Division of Vocational Education, Arizona Department of Education (ADE), provided a research grant to the College of Medicine, University of Arizona, to develop and design a manpower linkage medium for the Arizona health-care industry. Under the directorship of John T. Condon, Ed.D., CAN DO came into being. It was designed to improve the responsiveness and flexibility of health occupations educators, public and private, in meeting the economic and employment opportunities for Arizonans in the health-care industry through manpower training programs.

The CAN DO organization is designed so that industry is in the primary role. Any industrial unit (i.e., hospital, long-term care facility, manufacturing, high tech, etc.) of any size, with the assistance of the CAN DO staff, describes what the content of the training is to be, sets the criteria of expectations (performance skills), determines when the training is to start and end, where they wish the training to take place, and indicates their available resources (i.e., equipment, manpower, dollars, etc.) to support the training. CAN DO then announces the training request to all accredited and/or licensed public and private educational institutions serving the region in which the industry needs the training. The educational institutions that are interested submit mini-proposals on how they would design and implement the requested training; what resources they have (i.e., equipment, location, faculty, dollars, etc.); plus their costs of providing the training. It is this mini-proposal process that introduces the concept of competition into the CAN DO model. The industry selects from the proposals the respective educational institution to do their training. A linkage results, agreements are made, and the training begins.

The uniqueness in CAN DO lies in two areas: 1) it provides the proprietory schools an equal opportunity with the public institutions to participate in start-up, short-term, job-specific training requested by industry, and 2) it provides the respective industry with alternate solutions to meet their training needs from which they select the most suitable training programs.

Proprietory schools and colleges have been an integral part of CAN DO. They receive every announcement for training and are eligible recipients of any Job Training Partnership Act (JTPA) federal training dollars, as are the public institutions. Each private school/college in Maricopa and Pima counties is a member of CAN DO along with the Arizona State Board of Private Technical and Business Schools. Two such institutions have provided training in Maricopa County and one in Pima County over the past two years.

In 1983 to the present time, the CAN DO project has linked with the Industry Training Services (ITS) project, another service and funding effort by the Arizona Department of Education. CAN DO/ITS now directly serves Pima, Pinal, Gila, and Maricopa counties for all industrial categories, including health care, and provides support services to all other Arizona counties through their respective ITS project coordinators. Some 24 training programs have been managed and funded through CAN DO/ITS these past two years.

The role of the proprietory schools/colleges has been prominent, effective, responsive, flexible, and supportive of industry's training requests through CAN DO/ITS linkages. CAN DO/ITS is again seeking funding for its continuance for 1985-86 from the Arizona Department of Education (ADE). ADE's interest, services, and funds are having a major impact on retraining, preparation training, and new skill training for Arizona's citizens to be employable in expanding, new, and adjusting Arizona industries.

Dr. John T. Condon
CAN DO

THE JTPA 3 PERCENT OLDER WORKER PROGRAM

The Job Training Partnership Act (JTPA) sets aside 3 percent of the Title II-A funds (for adult and youth training services) to provide special employment programs for older workers. The target population is defined as persons 55 and older who are economically disadvantaged and who have experienced difficulty obtaining employment or re-entering the work force.

The Department of Economic Security's Aging and Adult Division is responsible for the administration of the JTPA Older Worker Program and provides technical assistance regarding implementation and operation of the training and supportive services provided by the Service Delivery Areas and the agency subcontractors.

FOR THE EMPLOYER'S INTEREST. . .

Recent studies by the U.S. Department of Health & Human Services on both a regional and national basis indicate that a number of myths related to older workers and their performance are not substantiated by employer responses and supervisory evaluations. The following facts are provided to alleviate some of the myths:

MYTH NO. 1: Older workers are less productive than the average worker.

Research shows that productivity does not decline with a worker's age. Older employees work as well as younger employees in most jobs. Moreover, older workers meet the productivity expectations of their companies.

MYTH NO. 2: It costs more to prepare the older worker for the job than it does to prepare other workers.

There is little reason to believe that job preparation (training and orientation) of older workers is more costly than for other age groups. Employers should, of course, consider the most cost-effective ways of preparing older workers for a new job, such as practical exercises and on-the-job training.

MYTH NO. 3: The costs of employee benefits outweigh any possible gain from hiring older workers.

The costs of some benefits (such as health, disability, and life insurance) typically do increase with a worker's age. Other fringe benefits, however, are more closely tied to length of service and level of salary. A study of employment costs at the Travelers Insurance Companies found that it was not safe to assume that older workers cost more or less than younger workers.

MYTH NO. 4: Older workers do not get along well with others.

Studies show that older workers have records as good as or better than younger workers in terms of interpersonal relationships, dependability, and job commitment. Business owners who hire older workers find that they can bring stability to the work place and that they often serve as role models to younger workers.

MYTH NO. 5: Older people want to retire as soon as they can and remain in retirement.

Because of the diversity of older people, this is not necessarily true or false. Whether older persons want to work depends upon the individual, the inflation level, the availability of jobs (especially part-time jobs), and the adequacy of retirement incomes.

MYTH NO. 6: Older workers are prone to frequent absences because of age-related infirmities and above-average rates of sickness.

Data show that workers age 65 and over have attendance records that are equal to or better than most other age groups of workers. Older people who are not working may have dropped out of the work force because of their health. Older workers who stay in the labor force may well represent a self-selected healthier group of older people.

MYTH NO. 7: Older workers have an unacceptably high rate of accidents at work.

Reality is the reverse of the myth. Data show that older workers account for only 9.7 percent of all workplace injuries despite the fact that they make up 13.6 percent of the labor force.

PROGRAM ACCOMPLISHMENTS. . .

The Aging and Adult Administration, along with the JTPA Administration, highlight the following efforts and achievements of several programs in the placement of older workers.

1) The City of Phoenix, Aging Services, had an outstanding placement record for FY 84-85. A total of 90 older workers were enrolled and 78 were placed in unsubsidized employment.

2) The Cochise County Private Industry Council provides an Older Worker Program which emphasizes development of individual skills, self-reliance, and the establishment of independent and/or cooperative business operations.

3) The Cocopah Indian Tribe has developed a three-year plan for development and preservation of tribal history, crafts, and artifacts; the construction of a tribal cultural center; and the use of tribal elders as instructors in an arts and crafts skill development program.

THE CHALLENGE STILL AHEAD. . .

The challenge to the Older Worker Program is to expand training opportunities available to older workers; to increase the number of unsubsidized jobs for older workers; and to coordinate the efforts of training and employment planners, area agency directors, and private sector employers. The emphasis is on an effective, comprehensive older workers employment program which is a vibrant segment of the Arizona employment scene.

Jim Wilbanks and Steve Sandoval
Arizona Department of Economic Security

HIGH SCHOOL TO COLLEGE ARTICULATION

Taxpayers are now saving money because some high school and college programs are coordinated. Taxpayers are benefiting when buildings, equipment, and teachers are used to full advantage. But taxpayers are not the only winners. Students are saving time, money, and effort when not forced to repeat previously learned skills. High schools can now offer college level courses and colleges are receiving better-qualified applicants.

Educators use the term "articulation" to describe this coordination. Articulation is not new--some schools and colleges have coordinated their programs for years. For example, many rural community colleges have long used high school facilities to teach adult education courses at night.

What is new is the large number of programs articulated during the past year statewide. High school and college administrators have been meeting regularly to solve common problems since passage of the Arizona Vocational Education Act of 1982. One result has been the development and implementation of about 100 articulation agreements statewide.

The simplest way to articulate is to contract for programs or services. For example, Tempe Union High School District contracts with the Maricopa Skill Center to train its students for the occupations of electronics fabricator, machinist, and welder. It would not be cost-effective for Tempe Union High School District to offer these training programs itself for the small number of students involved.

Most articulation agreements involve the granting of college credit to high school graduates who have skills equivalent to a college course. For example, at Mingus Union High School, students who take classes in accounting, data processing, and office administration at their high school are

exempted from taking beginning classes in those same programs at Yavapai College. Yavapai College has similar arrangements with every high school in Yavapai and Coconino counties. Maricopa and Pima counties have also made much progress in this area.

College credit can also be awarded to people who enter college with a valid license or certificate. Practical nursing program graduates of Metro Tech VIP (formerly Phoenix Union High School District Area Vocational Center) who have a valid practical nursing license, receive 24 first-year nursing credit hours upon admittance to the second year of the registered nursing programs at Maricopa Technical Community College, Phoenix College, and Scottsdale Community College.

However, it is articulation of a more complicated type that will capture the interest of citizens who pay for public education. They want to see buildings, equipment, supplies, and educators used to best advantage. This is occurring.

For example, Glendale Community College and Deer Valley Unified School District now offer diesel engine theory, passenger and light truck diesel, welding, machine shop theory, and digital concepts for both college and high school students at Deer Valley Vocational Technical Center. These courses are taught by Glendale Community College faculty.

Phoenix College and Metro Tech VIP have also combined resources in a creative, cost-effective way. Together they designed a culinary arts program that makes it possible for high school graduates to obtain a college degree in less time. Phoenix College has a program in food service administration but no kitchen in which to teach the quantity food preparation. Metro Tech VIP will soon have one of the best equipped teaching kitchens in the West. Both Metro Tech and Phoenix College students will learn quantity cooking in the new Metro Tech VIP teaching kitchen. Metro Tech VIP graduates will receive college credit when they continue their education at Phoenix College.

More articulation is on the way--partly because articulation benefits everyone--and partly because the time is right.

Articulation costs money. Busing students to another school is expensive and, since public education funds are based on enrollment, sending students somewhere else to take a class reduces a sending institution's budget. A receiving institution incurs added expense when it adds teachers and buys additional equipment and supplies to teach the sending institution's students.

In 1985 the Arizona Legislature responded to this problem. New legislation increases the reimbursement school districts receive for the cost of transportation and sending institutions are now able to apply for state reimbursement to cover the cost of articulation. Receiving institutions will bill sending institutions for the cost of teaching their students.

Local high school and community college governing boards statewide have also been very supportive of articulation. Their support is essential, since governing boards, college presidents, and school superintendents have final authority over articulation. The Maricopa County Community College District Governing Board, for example, placed such a high priority on articulation with high school districts that they hosted a dinner and board study session for governing board members and top administrators from the 17 Maricopa County high school districts.

But the real heros in this story are the extraordinary administrators and teachers who have made articulation happen. Recognizing the opportunities provided by the Arizona Legislature, and the benefits for students and taxpayers, they put aside turf considerations and worked together to develop articulation agreements that are mutually beneficial.

John Bradley
Maricopa Community Colleges

Carol LeBlanc
Arizona Community Colleges

EDUCATION-RELATED LEGISLATION PASSED IN THE 37TH SESSION

The Arizona economy is dependent on a qualified work force. "Importing" qualified personnel does not solve the problem. Now, more than ever, Arizona will be better able to produce the skilled workers required by the state's major industries because of legislation passed by the 37th Legislature.

H.B. 2205 - VOCATIONAL EDUCATION PROJECTS FUND

A key piece of legislation passed was House Bill 2205. The essence of the bill will help solve what has been a continuing problem not only in Arizona, but throughout the nation. The problem? Continuing to fund outdated programs merely because the programs had always been there. Most students in school now can expect to have at least three career changes in their lifetime. Teachers have a special challenge to keep up with the tremendous technological advances which occur on a daily basis. Vocational education must meet that challenge as well as the added dimension of having teachers with industry experience.

H.B. 2205 requires that the State Board for Vocational/Technical Education determine, through a study done by the Center for Vocational Education, a list of "high demand" jobs in Arizona. This list would then be prioritized to determine funding priorities. Programs which are not only "high demand" but also "high cost" will qualify for additional funding.

Another safeguard to verify program and staff standards is the utilization of local advisory committee recommendations. H.B. 2205 also addresses the cooperation, collaboration, and articulation between school districts and community college districts by allowing the schools or colleges to contract with each other. The programs must be State Board of Education approved programs. The district of residence could then compute twice the weight.

One significant change in vocational funding is that this bill addresses training for juniors and seniors in high school (11th and 12th grades). There have been concerns that the ninth and 10th grade students will not be funded. Schools may apply for funding, but the high demand/high cost programs will be given priority. Monies from other appropriated funds, both state and federal, may be used to support ninth and 10th grade programs.

In summary, the four main issues addressed in H.B. 2205 are:

1. An annually prescribed list of high-demand programs.

2. Added funding for programs which are "high demand and high cost."

3. Use of local business and industry advisory committees to recommend and verify staff and program standards.

4. School districts or community colleges may contract with each other for State Board approved programs. The district of residence may compute twice the group B weight for funding purposes.

Funding for 1985-86 will not exceed $3 million. In 1986-87, funding will be computed based on the amount of the previous year adjusted by the growth rate.

Other education-related bills passed by the 37th Legislature include:

H.B. 2235 - STATE AID TO COMMUNITY COLLEGES

This bill contains various provisions for changing state aid to community colleges including:

1. Capital Outlay - Replaces the current state aid per capita distribution for capital outlay with provisions for a fixed minimum appropriation based upon the amount a college was entitled to receive in 1984-85, plus additional appropriations based upon budget requests submitted to the legislature.

2. Maintenance and Operations - Revises the formula for state aid per capita distribution for maintenance and operation and provides for annual increases

in the formula amounts until state aid supports approximately 33 percent of the total operating budget of all community colleges in 1986-87.

3. Equalization Assistance - Increases the amount of equalization assistance for districts with low assessed valuation and repeals the expiration clause for equalization aid.

Estimated cost to the state: $8.6 million.

S.B. 1077 - SCHOOL BUDGETING AND FINANCE

This bill makes numerous changes in the school finance laws including: capital levy equalization, pupil transportation, state aid calculation, budget flexibility, maintenance and operations override, maintenance and operations budget capacity, provisions for small school districts, and kindergarten through grade three.

The estimated increase in school district budget capacity is $28.1 million while the estimated cost to the state is about $21.8 million.

S.B. 1336 - CAREER-LADDER PROGRAMS

This was another major bill establishing a five-year pilot project in which selected school districts may apply to a joint legislative committee to receive funding to implement career-ladder programs. Districts are eligible to apply for career-ladder funding if they have received a grant to develop a career-ladder plan or have submitted a career-ladder plan to the legislature. To be approved, a career-ladder program must establish a system which provides opportunities to teachers for continued professional advancement, which is based primarily on teaching skills, and in which each higher level requires either advanced skills or both advanced skills and additional responsibilities. The Joint Legislative Committee on Career Ladders will review the success of the pilot programs in 1989 to determine whether the opportunity to receive such funding should be extended to all school districts in the state.

Bev Jodar
Arizona House of Representatives
Research Department

DEVELOPING SURVIVAL SKILLS TO FIGHT THE FEMINIZATION OF POVERTY

The traditional family, where the wife stays home as homemaker and mother, and the father "brings home the bacon," is declining yearly and fast becoming an economic luxury. The proportion of women who are in the labor force has grown from one-third in 1950 to more than half today. A 20-year-old woman can expect to spend at least 45 percent of her life in the labor market.

More and more women are being forced to enter or re-enter the job market due to divorce. In Maricopa County, seven out of 10 marriages end in divorce. Of the households headed by women, more than half live in poverty. By the year 2000, virtually all poor in America are expected to be single mothers and their children.* The "feminization of poverty" necessitates a close examination of the special employment and training needs of women by educators, government, and private industry. The economic and family implications can be staggering.

This population has special needs that are often not addressed by employment and training institutions. Characteristically, single parents and displaced homemakers possess low self-esteem and lack self-confidence. Their lives have been centered around serving others and they are often out of touch with their own needs. A feeling of helplessness, combined with a lack of decision-making skills, often makes action seem impossible. Unfortunately, society encouraged girls to grow up to meet the knight in shining armor who would provide for them to live happily ever after. Though society--and specifically vocational educators--have made enormous strides to overcome this myth, many high school girls are still relying on it in 1985. As a result, many women entering or re-entering the job market lack a knowledge of the vocational options available. Without career counseling, women will most often choose occupations they are familar with, such as hair-

dresser or grocery check-out clerk, without analysis of the labor market or wage scale.

Traditionally, displaced homemakers and single parents have little or no work experience. Those with experience usually have large gaps in their work history. Day care and transportation needs must be met. Until a mother feels secure about her children's care, full energy cannot be directed toward training or employment.

Arizona Women's Employment and Education (AWEE) has developed a model program to specifically meet these needs of single parents and help them achieve economic self-sufficiency. The program consists of four components: motivation, training, placement, and support services.

Clients begin by attending a three-week (90 hours) intensive pre-employment readiness course. All activities are group oriented and designed to enhance self-esteem, resulting in the development of strong group support. Internal barriers are examined, skills are developed in decision making and goal setting, resulting in a change from "I can't" to "I can."

All activities are geared toward achieving and retaining economic independence. Clients explore career options, identify their skills and abilities, and learn how to translate homemaking and volunteer experience to the job market. Informational interviews and specific labor market information is provided individually by area employers. Back-up child care and transportation plans are also secured.

Upon graduation, a client has developed short- and long-range employment goals, detailing the steps to completion. AWEE graduates have prepared a resume and cover letter, participated in videotaped mock interviews, engaged in role-playing activities concerning conflicts which may occur on the job, and acquired knowledge on appropriate dress and demeanor on the job. Friends have been made and steps are being taken to reach that first paycheck. Many say that "AWEE changed my life." This is untrue. They changed their outlook on the future by looking at change as a personal opportunity for growth and by gaining the self-confidence to begin.

The transition to employment or to training often presents difficult problems for the single parent. To ease this transition, AWEE provides two years of follow-up support services. Every client is contacted monthly to make sure everything is proceeding as planned. As "hand holding" only increases dependence, AWEE provides support and encouragement for clients to practice the problem-solving skills learned in training. Support services provided include free legal assistance, free medical advice, an emergency fund, a clothing bank, crisis counseling, social service referrals, and job placement assistance. These support services have ensured AWEE's employment retention rate of 80 percent after two years.

The success of AWEE's program is founded on cooperation between government, the community, and private industry. In order to avoid duplication of existing services to single parents and women re-entering the job market, AWEE enjoys the support of the Maricopa County Human Resource Department, the Department of Vocational Education, the Governor's Office of Community Programs, the Community Action Programs, over 250 area employers, private and corporate contributors, and the Job Training Partnership Act. Last year, over 800 women received services, with 86 percent continuing their education or gaining employment.

As each individual woman overcomes personal barriers and gains economic independence, a step has been taken to reduce the feminization of poverty. This, however, is only the beginning. More programs designed to specically meet the needs of women returning to work must be established. Otherwise, the battle will be lost.

Marilee Robertson
Arizona Women's Employment and Education

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*SOURCE: The Feminization of Poverty, a pamphlet published by Wider Opportunities for Women, Inc.

EDUCATIONAL LEVEL OF ARIZONANS 25 YEARS AND OVER
(1980 Census)

COUNTY	LESS THAN 5 YEARS ELEMENTARY SCHOOL	HIGH SCHOOL GRADUATES	4 OR MORE YEARS OF COLLEGE	MEDIAN YEARS OF SCHOOL COMPLETED
Apache	26.2%	49.3%	10.4%	11.8
Cochise	4.7	68.8	13.8	12.5
Coconino	8.6	74.4	23.2	12.8
Gila	3.6	61.7	7.8	12.3
Graham	5.4	60.5	10.0	12.3
Greenlee	3.2	68.3	9.9	12.4
Maricopa	2.7	75.0	18.3	12.7
Mohave	1.0	69.1	8.8	12.5
Navajo	12.6	59.7	11.2	12.3
Pima	2.9	74.6	20.7	12.7
Pinal	7.0	55.0	9.3	12.2
Santa Cruz	9.3	54.0	13.2	12.2
Yavapai	1.1	73.9	16.2	12.5
Yuma	7.5	61.6	10.9	12.3
ARIZONA	3.8	72.4	17.4	12.7
U.S.	3.4	68.7	17.0	12.5

NOTE: Data are estimates based on a sample.

SCHOOL STATUS OF ARIZONANS 16-19 YEARS OLD
(1980 Census)

COUNTY	ENROLLED IN SCHOOL	HIGH SCHOOL GRADUATE	NOT ENROLLED, NOT HIGH SCHOOL GRADUATE	ARMED FORCES
Apache	61.1%	12.4%	26.5%	--
Cochise	69.3	12.3	13.7	4.7%
Coconino	74.1	13.4	12.5	--
Gila	62.8	13.5	23.8	--
Graham	73.2	14.8	11.9	--
Greenlee	65.3	21.7	13.0	--
Maricopa	64.0	16.8	18.4	0.8
Mohave	52.9	25.8	21.3	--
Navajo	59.4	14.0	26.0	0.6
Pima	69.5	15.2	14.1	1.3
Pinal	59.6	13.5	26.9	--
Santa Cruz	73.7	10.4	15.8	--
Yavapai	72.8	15.3	11.6	0.3
Yuma	53.5	13.9	26.0	6.5
ARIZONA	65.1	15.8	18.0	1.1
U.S.	70.1	15.3	13.2	1.5

NOTE: Data are estimates based on a sample. Figures may not total to 100.0 due to rounding error.

STATE APPROPRIATIONS FOR HIGHER EDUCATION
1984-85*
(in thousands)

	APPROPRIATIONS 1984-85	2-YEAR CHANGE
University of Arizona	$165,251	+31%
Arizona State University	118,716	+33%
Northern Arizona University	41,973	+25%
Community Colleges	47,758	+14%
Other Appropriations	3,462	N/C
TOTAL	377,160	+29%

HOW ARIZONA RANKS AMONG THE 50 STATES
ON 5 SCALES*

1984-85 APPROPRIATIONS		APPROPRIATIONS PER CAPITA		APPROPRIATIONS PER $1000 OF PERSONAL INCOME		2-YEAR CHANGE LESS INFLATION		10-YEAR CHANGE LESS INFLATION	
AMOUNT	RANK	AMOUNT	RANK	AMOUNT	RANK	PERCENT	RANK	PERCENT	RANK
$377,160,000	27	$128.50	21	$11.94	17	21%	2	17%	26

N/C= Not comparable.
*SOURCE: The Chronicle of Higher Education, October 31, 1984.

GENERAL FUND APPROPRIATIONS FOR ARIZONA PUBLIC UNIVERSITY SYSTEM
FY 1984-85

	ARIZONA STATE UNIVERSITY		NORTHERN ARIZONA UNIVERSITY	UNIVERSITY OF ARIZONA		BOARD OF REGENTS
	MAIN CAMPUS	WEST CAMPUS		MAIN CAMPUS	COLLEGE OF MEDICINE	
Operating Budgets, General Funds Appropriations (in millions)	$117.3	$1.3	$41.9	$134.3	$30.8	$3.1
Percent of Total General Funds Appropriation	35.6%	0.4%	12.7%	40.8%	9.4%	.9%

NOTE: Percentages do not total 100.0 due to rounding error.
SOURCE: Arizona Board of Regents.

FUNDS RECEIVED BY SCHOOLS FROM ARIZONA STATE TRUST LANDS
YEAR ENDING JUNE 30, 1984

	EARNINGS FROM TRUST LAND PERPETUAL FUNDS	RECEIPT DISTRIBUTION SALES INTEREST	LEASE RENTAL	PENALTY & INTEREST	TOTAL FUNDS RECEIVED
Normal Schools-	$23,656	$6,925	$64,714	$ 87	$ 95,382
Half to Arizona State University	23,656	6,925	64,714	87	95,382
Half to Northern Arizona University					
University of Arizona-					
Agricultural & Mechanical Colleges	107,191	41,773	180,800	363	330,127
Military Institutes	46,052	1,888	59,567	309	107,816
School of Mines	87,731	22,431	102,752	313	213,227
University Land Code	193,850	5,213	175,899	1,569	376,531
University of Arizona, Act of 2-18-1881	356,030	20,355	274,356	3,481	654,222
Total, University of Arizona	790,854	91,660	793,374	6,035	1,681,923
Permanent Common Schools	15,279,600	1,868,453	7,995,538	79,613	25,223,204

SOURCE: Arizona State Land Department, Annual Report, 1983-84.

STATISTICS IN EDUCATION
(Grades K-12)
1983-84

Number of Pupils Enrolled in Public Schools	561,122
Number of Pupils Enrolled in Private Schools	45,737
Total State Enrollment	606,859
Number of Public Schools	877
Number of Private Schools	318
Number of Public School Classroom Teachers	26,326
Female= 67.05% Male= 32.95%	
Total Expenditures (All education programs)	$1,332,364,647
Average Cost per Pupil (Public Schools only, All education programs)	$2,374
Average Salary per Teacher	$24,161
Revenues:	
State Aid	51.96%
Local Support	34.17
Federal Aid	10.30
County Aid	3.57

SOURCE: Arizona Department of Education, Annual Report of the Superintendent of Public Instruction, FY 1983-84.

ENROLLMENT AT ARIZONA PUBLIC UNIVERSITIES AND COMMUNITY COLLEGES
FALL 1984

	TOTAL STUDENTS (HEADCOUNT)	TOTAL STUDENTS (FTE)
PUBLIC UNIVERSITIES*		
Arizona State University	40,563	30,761
Northern Arizona University	11,826	10,142
University of Arizona	29,777	24,889
SUB-TOTAL	82,166	65,791
PUBLIC COMMUNITY COLLEGES**		
Arizona Western College	3,718	1,735
Central Arizona College	3,676	1,592
Cochise College	4,194	2,049
Eastern Arizona College	3,403	1,586
Glendale Community College	13,013	6,056
Maricopa Technical Community College	2,877	1,275
Mesa Community College	14,915	7,302
Mohave Community College	3,211	974
Northland Pioneer College	4,535	1,375
Phoenix College	11,798	5,574
Pima Community College	20,042	9,603
Rio Salado Community College	12,501	2,797
Scottsdale Community College	7,324	3,530
South Mountain Community College	1,154	608
Yavapai Community College	5,194	1,634
SUB-TOTAL	111,555	47,690
GRAND TOTAL	193,721	113,481

FTE = Full-time equivalent = Total number of credit hours divided by 15.

* SOURCE: Arizona Board of Regents.

** SOURCE: State Board of Directors for Community Colleges of Arizona.

FACULTY AT ARIZONA PUBLIC COMMUNITY COLLEGES
BY SEX, 1984-85

	MALE	FEMALE	PERCENT FEMALE
Arizona Western College	44	26	37.1%
Central Arizona College	64	17	21.0
Cochise College	70	27	27.8
Eastern Arizona College	50	10	16.7
Glendale Community College	112	55	32.9
Maricopa Technical Community College	30	28	48.3
Mesa Community College	117	62	34.6
Mohave Community College	28	14	33.3
Northland Pioneer College	INA	INA	--
Phoenix College	91	69	43.1
Pima Community College	156	114	42.2
Rio Salado Community College	3	0	--
Scottsdale Community College	61	41	40.2
South Mountain Community College	9	13	59.1
Yavapai Community College	49	22	31.0

INA= Information not available.
NOTE: Data are for full-time instructional staff.
SOURCE: Arizona Commission for Postsecondary Education, Higher Education General Information Survey (HEGIS).

AVERAGE FACULTY SALARIES FOR ARIZONA PUBLIC COMMUNITY COLLEGES
1984-85

	MALE	FEMALE	RATIO*
Arizona Western College	$25,839	$23,320	90.2%
Central Arizona College	29,251	30,168	103.1%
Cochise College	24,568	23,412	95.3%
Eastern Arizona College	24,662	22,656	92.0%
Glendale Community College	36,215	34,116	94.2%
Maricopa Technical Community College	35,377	32,408	91.6%
Mesa Community College	36,075	33,450	92.7%
Mohave Community College	23,790	23,631	99.3%
Northland Pioneer College	INA	INA	--
Phoenix College	33,487	39,183	117.0%
Pima Community College	27,164	26,219	96.5%
Rio Salado Community College	INA	INA	--
Scottsdale Community College	33,891	32,966	97.3%
South Mountain Community College	25,189	25,449	101.0%
Yavapai Community College	29,827	26,895	90.2%

* Female salary as a percentage of male salary.
INA= Information not available.
NOTE: Data are for full-time instructional staff. Data to control for factors such as length of service were not available.
SOURCE: Arizona Commission for Postsecondary Education, Higher Education General Information Survey (HEGIS).

FACULTY AT ARIZONA PUBLIC UNIVERSITIES BY SEX AND RANK
1984-85

	PROFESSOR			ASSOCIATE PROFESSOR			ASSISTANT PROFESSOR			INSTRUCTOR		
	MALE	FEMALE	PERCENT FEMALE	MALE	FEMALE	PERCENT FEMALE	MALE	FEMALE	PERCENT FEMALE	MALE	FEMALE	PERCENT FEMALE
Arizona State University	433	50	10.3%	378	74	16.4%	189	98	34.1%	4	35	89.7%
Northern Arizona University	112	3	2.6	168	19	10.2	85	42	33.1	18	19	51.4
University of Arizona	614	28	4.4	278	56	16.8	134	64	32.3	10	12	54.5

NOTE: Data are for full-time instructional staff.
SOURCE: Arizona Commission for Postsecondary Education, Higher Education General Information Survey (HEGIS).

AVERAGE FACULTY SALARIES FOR ARIZONA PUBLIC UNIVERSITIES
1984-85
(in thousands)

	PROFESSOR			ASSOCIATE PROFESSOR			ASSISTANT PROFESSOR			INSTRUCTOR		
	MALE	FEMALE	RATIO*	MALE	FEMALE	RATIO*	MALE	FEMALE	RATIO*	MALE	FEMALE	RATIO*
Arizona State University	$43.6	$39.6	91%	$32.5	$30.4	93%	$27.0	$24.8	92%	$20.2	$20.3	101%
Northern Arizona University	$40.9	$39.5	97%	$31.4	$29.1	93%	$25.5	$25.2	99%	$20.9	$20.3	97%
University of Arizona	$45.3	$38.8	86%	$32.8	$31.0	95%	$27.6	$25.8	93%	$25.6	$20.4	80%

* Female Salary as a percentage of male salary.
NOTE: Data are for full-time instructional staff. Data to control for time-in-rank, productivity, and market factors were not available.
SOURCE: Arizona Commission for Postsecondary Education, Higher Education General Information Survey (HEGIS).

TUITION AND REQUIRED FEES AT ARIZONA'S PUBLIC UNIVERSITIES
1985-86

Resident Fees	$ 990
Average Resident Fees in 13 Western States (WICHE region)*	$ 1,012
Average Resident Fees at 50 Major State Universities	$ 1,488
Average Non-Resident Fees	$ 3,645
Average Non-Resident Fees in 13 Western States (WICHE region)*	$ 3,541
Average Non-Resident Fees at 50 Major State Universities	$ 3,993

* Averages based on 1984-85 WICHE data.
SOURCE: Arizona Board of Regents.

NEW DEVELOPMENTS

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" are limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

CONSTRUCTION: The Phoenix Planning Commission has approved the building of a high-rise project on the south bank of the Salt River as part of "Southbank," a project which has been proposed by DENRO Limited of Phoenix in partnership with a Minneapolis developer. The unanimous recommendation for approval of buildings up to 15 stories high came despite staff protests that the project would set a precedent for high-rises outside core areas designated for such intense development and that the project could interfere with plans to add a third runway to Sky Harbor Airport. If built according to plans, the project would put 4 million square feet of commercial and industrial space between the river and Interstate 10 from 32nd to 40th streets. The developers say they need the tall buildings to give the entire $500 million project a strong identity and to make it competitive. They propose three buildings of eight stories, three of ten stories, and two of 15 stories to be built on 62 acres of the entire 235-acre Southbank parcel.

Construction began on "Capital Centre," the first office building in Phoenix's Governmental Mall to offer space to private business. The $17 million project on 1.6 acres at the southeast corner of 15th Avenue and Washington will have 130,000 square feet of leasable space, including 14,000 square feet of executive suites. The four-story Capital Centre will be constructed with steel frame and contoured block with granite facing. The structure will also feature a two-story rotunda lobby with a 52-foot curved glass exterior.

EXPANSION: Defying the odds in a sagging high-tech industry, Fairchild Data Corporation announced plans to expand its Scottsdale facility by nearly 200 percent. An 80,000 square-foot addition to the present 46,000 square-foot facility will be used for manufacturing activities and offices. Lou Harper, Fairchild's president, said the expansion will allow the company to keep pace with sales and product projections. It will add up to 370 employees to its present workforce of 230.

LAYOFFS: Nortronics Company Incorporated of Tucson dismissed 63 local employees in September and will move the manufacturing of magnetic recording heads to its Maquiladora plant in Nogales, Sonora to cut costs. Plant manager, Earl Welbeler, said the closing is "an economic decision based on the downturn in the computer industry. Our level of business hasn't allowed us to keep this plant open." He said Nortronics has seen a substantial decrease in orders from two of its customers--one local and one in Colorado--but he declined to give specifics or identify the companies.

Motorola announced in mid-September that it will either dismiss or transfer 200 employees at its Mesa facility due to a drop in demand for semiconductors. This would bring the total number layed off so far this year in the Valley to 520 employees. However, company spokesman Ken Phillips, added that "It's certainly our intention to transfer as many as possible. These are trained workers." The Mesa plant, at Broadway and Dobson roads, employs about 4,000 people. Valleywide, Motorola has about 22,500 employees.

Gates Learjet Corporation also announced plans in mid-September for layoffs for 400 to 500 employees at its Tucson and Wichita, Kansas plants. The company has yet to determine the exact number of layoffs or how they will be split between Tucson and Wichita. A decline in sales of its business jets, coupled with an end of production of military jets in October, were cited as reasons for the layoffs.

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